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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF OREGON  
PORTLAND DIVISION

NATIONAL WILDLIFE FEDERATION, et al.,

Plaintiffs,

and

STATE OF OREGON,

Intervenor-Plaintiff,

v.

NATIONAL MARINE FISHERIES SERVICE,  
et al.,

Defendants,

and

NORTHWEST RIVERPARTNERS, et al.,

Case No. 3:01-CV-00640-SI

OREGON'S CORRECTED<sup>1</sup> MOTION  
FOR PRELIMINARY INJUNCTION AND  
SUPPORTING MEMORANDUM

Oral argument requested

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<sup>1</sup> Oregon files this Corrected Motion for Preliminary Injunction and Supporting Memorandum for the sole purpose of substituting a consistent form of citation to the administrative record for citations to the documents themselves, pursuant to the Court's Scheduling Order (ECF No. 2335).

Intervenor-Defendants.

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**MOTION FOR PRELIMINARY INJUNCTION FOR VIOLATIONS OF THE  
ENDANGERED SPECIES ACT**

Intervenor-Plaintiff State of Oregon (“Oregon”) hereby moves the Court for a preliminary injunction against the U.S. Army Corps of Engineers (“Corps”) to address its violations of section 7 of the Endangered Species Act (“ESA”), 16 U.S.C. § 1536 (a)(2) arising from the Corps and Bureau of Reclamation’s (“BOR”) (collectively, “Action Agencies”) Joint Record of Decision for Columbia River System Operations (“ROD”), dated September 28, 2020, which relies on the Biological Opinion for Continued Operation and Maintenance of the Columbia River System issued by the National Marine Fisheries Service (“NMFS”), dated July, 2020 (“2020 BiOp”).<sup>2</sup>

As set forth in detail in the Proposed Order<sup>3</sup> filed herewith, Oregon respectfully asks the Court to order the Corps to:

1. Expand the spring spill operation to provide voluntary spill for juvenile fish passage at the maximum level that meets, but does not exceed, state water quality standards for 24 hours per day, seven days per week, at six of the eight mainstem dams on the lower Columbia River (“LCR”) and lower Snake River (“LSR”);
2. Restore rollbacks on summer spill that were implemented for economic and/or power considerations at the eight LCR and LSR dams;
3. Provide surface-oriented spill (i.e., spill levels sufficient to allow fish passing the dams to access a spillway passage route) for 24 hours per day, seven days per week, at the eight LCR and LSR dams from September 1 to the start of the spring spill seasons;

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<sup>2</sup> This motion does not address all of the claims in Oregon’s Fifth-Supplemental-Complaint-in-Intervention for violations of the ESA nor any of its claims for violations of the National Environmental Policy Act (NEPA). Oregon does not waive any of these claims and will address them in its motion for summary judgment in accordance with the Court’s scheduling order.

<sup>3</sup> Because of the level of detail required to explain Oregon’s requested relief, the technical elements of the relief sought are identified in the Proposed Order.

4. Operate the LSR reservoirs at Minimum Operating Pool (“MOP”) with a one-foot operating range for the spring and summer seasons;
5. Prepare an implementation plan by September 1, 2022 to operate the LCR reservoirs at MOP with a one-foot operating range for the spring season, beginning in 2023.

Oregon’s Motion is supported by the accompanying Memorandum, the Declaration of Edward Bowles (“Bowles Decl.”), and the Proposed Order.

### **CONFERRAL CERTIFICATION**

In compliance with LR 7-1(a), Oregon has conferred with counsel for the Corps, BOR and NMFS (collectively, “federal defendants” or “federal agencies”). Federal defendants oppose the motion. Oregon informed counsel for intervenors and *amici* of the motion. Of those that responded, the intervenors and amici aligned with federal defendants also oppose the motion, and unaligned amici will set forth their positions in accordance with the briefing schedule the Court has set. The Confederated Tribes of the Colville Reservation, the Coeur d’Alene Tribe and the Spokane Tribe take no position on the motion.

### **MEMORANDUM IN SUPPORT INTRODUCTION**

For nearly thirty years, the federal agencies responsible for operating the Columbia and Snake River dams have struggled, and failed, to develop and implement operations that comply with the ESA. Since 1993, three different federal district court judges have invalidated six biological opinions (BiOps) issued by NMFS—in the years 1993, 2000, 2004, 2008, 2010 and 2014—for failing to ensure that operation of the Columbia River System (“CRS”) is not likely to jeopardize listed salmon and steelhead. Over these decades, as federal defendants have wasted precious time interpreting and reinterpreting the ESA and its regulations, listed salmon and steelhead impacted by the CRS have suffered a steady decline and currently teeter on the brink of

extinction. The adverse impacts of climate change deepen the crisis for listed fish and intensify the urgency that the federal defendants comply with their legal obligations.

In the 2020 BiOp and ROD, history repeats itself. Once again, federal defendants abruptly change course; instead of remedying the legal errors this Court identified in its Opinion and Order invalidating the 2014 BiOp, federal defendants cast aside previous analytical frameworks, set an even lower bar for jeopardy and abandon the recovery analysis. Despite the listed species' highly degraded population status and high risk of extinction, federal defendants conclude that the continuation of status quo operations is not likely to jeopardize any listed species nor adversely modify or destroy their critical habitat. In so doing, federal defendants rely on Trump-era revisions to the ESA regulations and employ a comparative jeopardy framework similar to that of the 2004 BiOp, a BiOp that Judge Redden described as “a cynical and transparent attempt to avoid responsibility for the decline of listed Columbia and Snake River salmon and steelhead.” *NWF v. NMFS*, 839 F. Supp. 2d 1117, 1130 (D. Or. 2011) (hereafter “*NMFS IV*”).

In its decisions invalidating previous BiOps, the Court has repeatedly emphasized the perilous status of listed species and the urgent need for federal defendants to comply with the ESA by taking aggressive actions to protect listed salmon and steelhead. The 1993 BiOp was “seriously, significantly, flawed because it [was] too heavily geared towards a status quo that has allowed all forms of river activity to proceed in a deficit situation—that is, relatively small steps, minor improvements and adjustments—when the situation literally cries out for a major overhaul.” *Idaho Dep’t of Fish and Game v. NMFS*, 850 F. Supp. 886, 900 (D. Or. 1994) (hereafter “*IDFG*”), *remanded by* 56 F.3d 1071 (9th Cir. 1995) (internal quotations omitted). Decades later, the 2014 BiOp failed to consider aggressive action to protect listed fish, instead focusing “essentially on the same approach to saving the listed species—hydro-mitigation efforts that minimize the effect on hydropower generation operations with a predominant focus on habitat restoration. These efforts have already cost billions of dollars, yet they are failing. Many

populations of the listed species continue to be in a perilous state.” *NWF v. NMFS*, 184 F. Supp. 3d 861, 876 (D. Or. 2016) (hereafter “*NMFS V*”).

In 2016, the Court expressed optimism that a court-ordered NEPA process may finally “break through any logjam that simply maintains the precarious status quo” and “elucidate an approach that will finally move the listed species out of peril.” *Id.* at 876, 948. Unfortunately, this breakthrough did not occur; the NEPA process undertaken by BOR and the Corps contained fundamental legal flaws and yielded a BiOp and ROD that fail to comply with the ESA and NEPA. Many of the errors identified by this Court in invalidating prior BiOps are repeated in the 2020 BiOp and ROD. The logjam and precarious status quo remain and have worsened because of low population abundances, climate change, and the last 30 years of illegal operation of the dams.

The CRS operations evaluated in the 2020 BiOp and selected in the ROD do not contain necessary and legally required measures to protect listed fish. Instead, they continue the interim “flexible spill operation” negotiated by Oregon, the Nez Perce Tribe, Washington and federal defendants in 2018. But the flexible spill operation was a short-term stop-gap measure negotiated by the parties to provide federal defendants with a litigation-free opportunity to develop a long-term operation that complies with the ESA and NEPA; the flexible spill operation was never intended to be the long-term solution itself, nor does it supply the needed fish benefits to ensure that the CRS is not likely to jeopardize listed fish or adversely modify critical habitat. Federal defendants’ analysis—and the basis for their no-jeopardy conclusion—is even more concerning than in prior BiOps because, after 2021, the Selected Alternative calls for “adaptive implementation” of the flexible spill operation over the remaining 14-year term of the 2020 BiOp. The adaptive implementation process is undefined, provides no minimum spill operation or contingency plan, and expressly constrains conservation actions to ensure that BPA is no worse off financially than it was under the 2018 spill injunction.

By adopting an amorphous and unenforceable adaptive implementation plan, the Action Agencies are essentially saying “trust us” to take necessary steps to protect threatened and endangered species. History has shown that they are not deserving of that trust. Over twenty years ago, NMFS recognized that “breaching the four lower Snake River dams would provide more certainty of long-term survival and recovery than would other measures,” and therefore committed to a contingency plan that would allow for speedy Congressional authority to breach the lower Snake River dams if the reasonable and prudent alternative (“RPA”) actions did “not provide the anticipated survival rate increases, or that subsequent information shows the predicted improvements are inadequate.” 2000 BiOp Section 9.1.7 at 9-5. Now, after many years of small tweaks to status quo operations, listed fish remain in perilous condition and many populations have seen precipitous status declines since the 2014 BiOp. Instead of following through on their decades-old commitment to seek Congressional authority for dam breach, the federal defendants adopted a ROD and issued a BiOp that contain no contingency plan to protect listed species from entering further declines, much less a long-term solution for listed species impacted by the CRS.

Listed fish are irreparably harmed by the status quo operation of the CRS, and Oregon’s requested injunctive relief will reduce that harm. Until federal defendants comply with their legal obligations and develop a long-term solution, it is imperative that the Court order key short-term measures to protect listed fish from further declines and likely extinction. Oregon’s requested relief focuses on measures that maximize benefits to the fish within the existing configuration of the eight mainstem dams. Increasing spill and decreasing fish travel time have long been recognized as effective conservation measures to benefit listed fish, and they continue to be the focus of Oregon’s requested relief. Some elements of Oregon’s requested relief seek reinstatement of requirements designed to benefit fish that were previously implemented by the Corps but, over time, were modified or eliminated to benefit power or other authorized purposes of the CRS. Given the dire situation faced by listed populations and the wholly inadequate

alternative selected by the Corps, it is imperative to restore the environmental protections for fish that were rolled back from previous BiOps because of non-biological considerations.

Like the Flexible Spill Agreement negotiated in 2018, implementation of the requested relief will not cure federal defendants' violation of the ESA, nor will it provide adequate protection for listed populations. But until there is a comprehensive solution that includes restoring a free-flowing lower Snake River, it is imperative that the Corps implement essential conservation actions to reduce irreparable harm from the CRS on listed salmon and steelhead.

## **BACKGROUND**

### **I. Status of the listed species.**

#### **A. The status of many listed populations has declined even further since issuance of the 2014 BiOp.**

In its decision invalidating the 2014 BiOp, the Court found that listed fish were imperiled based on, among other things, the overall viability rating of the species as reported in NMFS' 5-year status review completed in 2011. *See NMFS V*, 184 F. Supp. 3d at 880, 890 (citing Table 2.1-1 on page 71 of 2014 BiOp); *see also id.* at 872, 876, 879, 892, 918, 947 (citing relevant data). NMFS' most recent 5-year review of Snake River Sockeye, Chinook and Steelhead, completed in 2016 and relied on in the 2020 BiOp, indicates that the overall viability ratings for the listed species have not improved. All populations of Snake River spring/summer Chinook, except one, are either at high risk of extinction or functionally extirpated. *See* 2020 BiOp at 104, Table 2.2-2 [ACE001056323];<sup>4</sup> Bowles Decl. ¶ 5. Similarly, the Snake River sockeye salmon ESU remains at a high risk of extinction.

2020 BiOp at 436 [ACE001056655]; Bowles Decl. ¶ 5. The 2021 status review has not yet been released, but there is no evidence to suggest that there has been any substantive improvement in the status of listed fish since the 2016 report. Bowles Decl. ¶ 5.

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<sup>4</sup> Citations to the 2020 BiOp, 2020 ROD and EIS are to the Corps' Administrative Record and are in the form "ACE" with a Bates-stamped page number. Citations to NMFS' Administrative Record in this Motion are in the form of "NMFS" with a Bates-stamped page number.

Instead, population abundances of several listed populations have *declined* dramatically in the intervening years since issuance of the 2014 BiOp and, for those populations that have seen improvements, those improvements have been marginal. *Id.* ¶ 6. Recently, several listed species of salmon and steelhead have experienced dramatic abundance declines, at a magnitude not seen since the then-unprecedented declines of the mid-1990s. *Id.* These declines are so significant that they tripped the “Early Warning Indicator” and “Significant Decline Trigger” of the Adaptive Management Implementation Plan (“AMIP”) used in prior BiOps. *Id.* The Significant Decline Trigger was purportedly a crisis safety net, which was never expected to be triggered. *Id.* As stated in the AMIP itself, the Significant Decline Trigger indicates that “the observed condition [is] a significant deviation from the biological expectations in the 2008 BiOp. If it were to persist despite the AMIP’s short and long-term contingency actions, it could call into question the BiOp’s No Jeopardy conclusion for one or more species, resulting in the reinitiation of consultation.” AMIP at 31, *available at* [https://www.salmonrecovery.gov/Files/BiologicalOpinions/AMIP/AMIP\\_09%2010%2009.pdf](https://www.salmonrecovery.gov/Files/BiologicalOpinions/AMIP/AMIP_09%2010%2009.pdf) (last visited July 12, 2021); *see also* Bowles Decl. ¶¶ 6-7.

The 2020 BiOp predicts that most listed salmon and steelhead populations that migrate past the CRS dams will continue to have dangerously low abundances under the proposed action. *See* Bowles Decl. ¶ 9. Extinction risk is heightened with the increasing magnitude, frequency, scope, and duration of these downturns in abundance. *Id.* ¶ 10. Most listed species have experienced several of these downturns since the mid-1990s, with the recent downturn for many populations as perilous as the downturn precipitating ESA listing. *Id.*

**B. An alarming number of populations are currently at or below Quasi Extinction Thresholds.**

In conservation science, Quasi Extinction Thresholds (“QETs”) are important criteria generally reflecting tipping points for population collapse, where avoidance of absolute extinction can no longer be assumed or predicted. *Id.* ¶ 18. Below QET, uncertainty and

extinction risk can amplify and accelerate due to heightened vulnerability of small populations to demographic, genetic and environmental risks. *Id.* Avoiding extinction can no longer be assumed or predicted once below QET; thus, conservation scientists and managers typically use QET, not zero fish, as the “floor” for assessing extinction risk and population viability. *Id.* For example, NFMS’ Technical Recovery Teams’ criteria for QET generally is population abundance of 50 adult spawners per year for four consecutive years, which they used to assess extinction risk for population viability analysis when appropriate data were available. *Id.* NMFS’ Technical Recovery Teams’ criteria for viability generally requires the probability of extinction (i.e, QET) be 5% or less for the next 24, 50 or 100 years. *Id.*

Many listed fish have already reached the QET tipping point, which not only accelerates extinction risk but also heightens the likelihood that populations may no longer be able to respond favorably to improved conditions. The QET status of Snake River salmon and steelhead—populations that must pass eight dams during both their juvenile and adult migration—is particularly dire. *Id.* ¶¶ 19-23. Approximately one quarter to nearly one half of listed Snake River spring-summer Chinook populations are already at QET; approximately one third to three quarters are predicted be at or near QET within the next five years. *Id.* ¶ 23. Approximately one sixth to one fifth of listed Snake River summer steelhead populations are already at QET, with nearly one half to two thirds expected to be at QET within the next five years. *Id.*

**C. Smolt-to-Adult Returns (SARs) are too low for survival and recovery of listed species.**

For a salmonid population to grow, it is necessary that more adult progeny (recruits) return to spawn than the number of parents that produced them. *Id.* ¶ 25. It is not enough for this to occur sporadically but must continue consistently over time. *Id.* Production of recruits depends on: (1) the number of eggs that survive to become out-migrating juveniles (“smolts”) per spawner, which generally occurs in natal freshwater tributaries prior to entry into the CRS;



and (2) the survival of those smolts to adulthood (SAR). *Id.* SARs are an important measure of the effects of hydrosystem operations and configuration, as well as other impacts, on life-cycle survival of salmon and steelhead populations. *Id.* ¶ 26. SARs include multiple sources of mortality beyond just the CRS; however, the SAR stage is critically important for understanding CRS impacts on listed fish because it includes all sources of mortality (direct and delayed or indirect) associated with the hydrosystem. *Id.*

A SAR of 2% is the low point of the range of SARs necessary for populations to maintain their abundance and avoid population decline. *Id.* ¶ 27. A SAR of 2% means that, for every 100 fish that migrate through the CRS as juveniles, two adult fish return. *Id.* ¶ 26. This should not be viewed as an average target across a range of environmental conditions, but as the minimum SAR observed during periods of unfavorable environmental conditions. *Id.* ¶ 27. At low abundances, maintaining at least a SAR of 2% is critically important because the population cannot afford further declines without heightened extinction risk. *Id.*

SARs for Snake River salmon and steelhead are particularly concerning. *Id.* ¶ 28. It is well established that SARs for Snake River spring-summer Chinook are on a declining trend and are currently well below the levels needed for population replacement. *Id.* ¶ 29. SARs for wild Snake River summer steelhead also show a precipitous decline and continued depression. *Id.* ¶ 30.

**D. The weight of scientific evidence makes clear that CRS dams and operations are an important factor in the imperiled status of listed fish and that the adverse impacts of the CRS are exacerbated by climate change..**

It is not scientifically disputed that configuration and operation of the CRS is an important factor in the decline, listing and ongoing imperilment of listed fish; that environmental factors such as poor ocean conditions, drought, reduced snowpack, reduced river flow, and elevated water temperatures are important factors in the decline and ongoing imperilment of these listed fish; that the frequency, magnitude and duration of these unfavorable environmental factors are increasing with climate change; and that adverse impacts of CRS dams and operations

on listed fish can be exacerbated during periods of unfavorable environmental conditions. *Id.* ¶¶ 31-33. As a result, there is heightened urgency to address the substantial and ongoing CRS impacts on listed fish—particularly against the backdrop of climate change and associated deterioration of marine and freshwater environments—because listed species have little to no survival cushion left to sustain themselves.

## **II. Summary of prior CRS BiOps.**

The long history of illegal CRS BiOps is set forth in detail in previous cases. *See NWF v. NMFS*, 254 F. Supp. 2d 1196 (D. Or. 2003) (hereafter “*NMFS I*”) (invalidating 2000 BiOp); *NWF v. NMFS*, 2005 WL 1278878 (D. Or. May 26, 2005) (hereafter “*NMFS II*”), *aff’d*, 524 F.3d 917 (9th Cir. 2008) (hereafter “*NMFS III*”) (invalidating 2004 BiOp); 839 F. Supp. 2d 1117 (D. Or. 2011) (hereafter “*NMFS IV*”) (invalidating 2008/2010 BiOps); 184 F. Supp. 3d 861 (hereafter “*NMFS V*”) (invalidating 2008/2010/2014 BiOps). These opinions provide comprehensive and thorough legal analyses of federal defendants’ failure to comply with the ESA over the past decades, the repeated admonitions and direction provided to federal defendants by this Court and the Ninth Circuit, and federal defendants’ continual failure to heed those admonitions. For ease of reference, **Appendix 1** to this Memorandum is a case chart highlighting the relevant Court holdings from 1993 to 2016 regarding prior BiOps in this matter.

## **III. Spill injunction, Flexible Spill Agreement and 2019 BiOp.**

### **A. 2017 Spill Injunction.**

In early 2017, Plaintiffs moved for an injunction under the ESA to increase voluntary spill for fish passage at the eight mainstem dams to the maximum level allowed by state water quality standards for the spring of 2017 and spring of 2018. *See NWF v. NMFS*, 2017 WL 1829588, at \*1, \*9 (D. Or. Apr. 3, 2017) (ECF No. 2190) (hereafter *NMFS VI*) (granting motion but delaying implementation until spring of 2018). In granting the motion, the Court noted “there is ample evidence in the record that indicates that the operation of the [CRS] causes

substantial harm to listed salmonids” and that “continuation of the status quo is likely to result in irreparable harm to the listed species.” *Id.* at \*5. The Ninth Circuit affirmed. *NWF v. NMFS*, 886 F.3d 803 (9th Cir. 2018) (hereafter *NMFS VII*).

**B. Flexible Spill Agreement and 2019 BiOp.**

In December 2018, Oregon, Washington, the Nez Perce Tribe, the Action Agencies and BPA executed an interim agreement (“Flexible Spill Agreement”) to govern voluntary spring spill operations during the remainder of the remand (2019, 2020 and 2021),<sup>5</sup> or until federal defendants issued a new BiOp concurrent with an EIS and ROD. *See NWF v. NMFS*, Status Report re: 2019-2021 Spill Operations Agreement (Dec. 18, 2018) (ECF No. 2298) (hereafter “Agreement”) (and Exhibit thereto). The goal of this interim agreement was to provide a temporary stop-gap spill operation to allow the parties to avoid litigation during the NEPA remand period. *See* ECF No. 2298 at 2. The parties agreed to litigation forbearance during the term of the Flexible Spill Agreement but expressly acknowledged that “no [p]arty makes any concessions regarding the legal validity [or] scientific validity . . . of the spill operations contemplated in this Agreement.” Agreement § X.B. (ECF No. 2298-1).

“[S]olely for purposes of” the Flexible Spill Agreement, the parties agreed to objectives that aimed to provide three things: (1) fish benefits that (a) in 2019, were at least equal to those in the 2018 injunction, and (b) in 2020 and 2021, were improved further (“fish objective”); (2) federal power system benefits with the understanding that BPA must, at a minimum, be no worse financially compared to the 2018 injunction (“power-cost objective”); and (3) operational feasibility for the Corps (“operational feasibility objective”). *See* Agreement § III (ECF No. 2298-1).

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<sup>5</sup> On October 19, 2018, then-President Trump directed the agencies to issue these documents by September 30, 2020, one year earlier than the agencies had stated was possible. *See* 2020 BiOp at 95 and 95 n.16 [ACE001056314]. The agencies complied with that directive.

Pursuant to the Flexible Spill Agreement, the planned spring spill operations for 2020 and 2021 required: (a) spill for 16 hours per day at 125% Total Dissolved Gas (“TDG”) spill cap at six of the eight CRS projects, 120% TDG spill cap at John Day and 40% at The Dalles; and (b) eight hours per day of “performance standard spill” at all eight CRS projects. *See* Agreement § VI.B.2 and Attachment Tables 1.1 and 1.2 (ECF No. 2298-1). The Flexible Spill Agreement also allowed reductions to summer spill levels during the last two weeks of August to meet the power-cost objective.

NMFS included the agreed-upon terms from the Flexible Spill Agreement in its 2019 BiOp. *See* 2019 BiOp at 32-35 [NMFS00361157-60]. The 2019 BiOp contained and perpetuated the legal errors identified above with previous BiOps and did not comply with NEPA. Consistent with the commitments in the Flexible Spill Agreement, however, there was no litigation over the 2019 BiOp.

#### **IV. EIS, ROD and 2020 BiOp (No Jeopardy).**

##### **A. Selected Alternative.**

In February 2020, the Action Agencies issued a Draft Environmental Impact Statement (“DEIS”) identifying six alternatives for operations, maintenance and configuration of the CRS. The Preferred Alternative (“PA”) consisted of a suite of measures that included the spill operations negotiated by federal defendants in the Flexible Spill Agreement and included in the 2019 BiOp. The PA formed the basis for the proposed action that the Action Agencies submitted to NMFS for formal consultation under section 7 of the ESA, and which was evaluated by NMFS in the 2020 BiOp. *See* 2020 BiOp at 45, 95 [ACE001056264, ACE001056314]. In the 2020 ROD, the Action Agencies designated the PA as the Selected Alternative and agreed with NMFS’ determination in the 2020 BiOp that implementation of this operation was not likely to jeopardize listed species or adversely modify critical habitat. The elements of the Selected Alternative most relevant to the instant motion are described below.

## 1. Spill.

The Selected Alternative defines target spill levels and dates for 2021 that are the same as the spill levels negotiated in the interim Flexible Spill Agreement and included in the 2019 BiOp. *See* 2019 BiOp at 34-35 (Table 1.3-2 and Table 1.3-3) [NMFS00361159-60]; 2020 BiOp at 56 [ACE001056275] (Table 1.3-1), 58 [ACE001056277] (Table 1.3-2). The Selected Alternative therefore includes reductions to summer spill levels from August 15 to 31 that were made in the course of negotiating the Flexible Spill Agreement so that the power-cost objective could be achieved.

The Selected Alternative does not define target spill levels or specify any minimum spill levels or biological performance targets for the years 2022 to 2035. Instead, it contemplates an Adaptive Implementation Framework (“AIF”) to establish spill levels for each year after 2021. *See* 2020 BiOp at 55 [ACE001056274] (citing DEIS App’x R, Part 2). The AIF does not prioritize benefits to fish; instead, it is designed to meet all three of the Flexible Spill Agreement’s objectives (fish, power-cost, and operational feasibility) as well as a fourth objective to “evaluate the effectiveness of the spring spill operation.” 2020 BiOp at 54 [ACE001056273]; *see also* Columbia River System Operations (“CRSO”) EIS App’x V, ESA Consultation, Part 1, CRS 2020 Biological Assessment (hereafter “BA”) at 2-49 [ACE001059560]. Inclusion of non-fish related objectives results in the dilution, if not the outright elimination, of any measures that will have a significant effect on survival of fish. Moreover, the AIF grants the Action Agencies sole authority and discretion to adapt or modify spill levels “to account for unanticipated outcomes that affect the ability of the Action Agencies to maintain their individual federal mandates.” EIS App’x R, Part 2 at R-2-1 [ACE001066379]; *see also id.* at R-5-1 [ACE001066387].

## 2. Reservoir elevations and flow operations.

The Selected Alternative is detrimental to fish as it relates to reservoir elevations and flow. The Action Agencies will operate LSR reservoirs at MOP “with a 1.5-foot operating range

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from April 3 until August 14 *unless adjusted on occasion to meet authorized project purposes*, primarily navigation.” *See* 2020 BiOp at 58-59 [ACE001056277-8] (Table 1.3-3) (emphasis added). These adjustments allow for a larger operating range—and therefore higher reservoir elevation levels—to accommodate navigation. *See id.* Table 1.3-3 n.2 (“variable MOP” at Lower Granite) and n.3 (“raised MOP” or “Expanded MOP” at Little Goose, Lower Monumental, and Ice Harbor Dams); *see also* Bowles Decl. ¶ 95; *cf.* 2008 BiOp RPA No. 5 [NMFS00036236-37]. The lower Columbia River reservoirs have not been required to operate at MOP in any of the prior BiOps and have not generally had a biologically-constrained operating range. Bowles Decl. ¶ 98. This results in normal operating elevations up to 6.5-feet above MOP depending on the project. *See* 2020 BiOp at 59 [ACE001056278], Table 1.3-3; Bowles Decl. ¶ 98. The John Day Reservoir elevation will be held between 264.5 and 266.5 feet (well above MOP) from April 10 to June 1. The proffered rationale for this elevation at John Day is to deter Caspian terns from nesting in the Blalock Islands Complex during this period. *See* 2020 BiOp at 58 [ACE001056277]; Bowles Decl. ¶ 100.

The Selected Alternative extends zero flow operations—even though zero flow is detrimental to fish passage—in the LSR between October 15 and February 28 as needed to benefit power. *See* 2020 BiOp at 63-64 [ACE001056282-3]. This change is a rollback in fish protection from the 2008/2014 BiOp that allowed this operation to start no earlier than December 1 and required that abundance-based criteria must be met prior to implementation. *See* Bowles Decl. ¶ 92.

#### **B. Jeopardy framework.**

NMFS concludes in the 2020 BiOp that CRS operations are not likely to jeopardize the continued existence of any listed species nor destroy or adversely modify critical habitat for a 15-year period. *See* 2020 BiOp at 1-2 [ACE001056220-1]. In reaching that conclusion, NMFS abandons the jeopardy and adverse modification standards and analytical framework adopted in the 2000 and 2008/2014 BiOps because, according to NMFS, those standards exceeded the

requirements of the ESA.<sup>6</sup> Nonetheless, even applying the standards that NMFS now says went beyond the minimum requirements of the ESA, the Court invalidated the jeopardy standard as applied by NMFS in those BiOps as arbitrary and capricious and in violation of the ESA. *NMFS V*, 184 F. Supp. 3d 861 (D. Or. 2016) (ECF No. 2065); *NMFS IV*, 839 F. Supp. 2d 1117 (D. Or. 2011) (ECF No. 1855); *NMFS II*, 2005 WL 1278878 (D. Or. May 26, 2005) (ECF No. 986), *aff'd*, *NMFS III*, 524 F.3d 917 (9th Cir. 2008); *NMFS I*, 254 F. Supp. 2d 1196 (D. Or. 2003) (ECF No. 396).

In the 2020 BiOp, NMFS purports to “return[] to [its] usual practice” of applying “the statutory language and [its] long-standing interpretations of section 7(a)(2) that are contained in the U.S. Fish and Wildlife Services’ (USFWS) and NMFS’ joint consultation regulations and preambles to those regulations.” 2020 BiOp at 45 [ACE001056264]. As discussed below, *see* Background § V.A.2 and Argument § I.A., the Trump Administration amended the ESA section 7 regulations in 2019, drastically loosening protections for threatened and endangered species. Those weaker rules were applied in the 2020 BiOp and ROD. *See* 2020 BiOp at 46 [ACE001056265]. (“The jeopardy and destruction or adverse modification analyses in this opinion...adhere to the interpretations of the ESA and its implementing regulations found in the preambles and responses to comments of the proposed and final rules referenced above.”); ROD at 20 [ACE000339683].

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<sup>6</sup> NMFS states that its intent in previous BiOps “was to adopt standards that provided ample assurances that the ESA’s section 7(a)(2) jeopardy prohibition was not violated. [NMFS] did not find or conclude that the 2000 or 2008/2014 biological opinion standards and analyses were required by the plain language of the ESA, or our implementing regulations.” 2020 BiOp at 44 [ACE001056263].



## **V. Legal Standards.**

### **A. Endangered Species Act.**

#### **1. Statute.**

The fundamental purposes of the ESA are to “provide a means whereby the ecosystems upon which endangered ... and threatened species depend may be conserved, [and] to provide a program for the conservation of such [endangered and threatened] species[.]” 16 U.S.C. § 1531(b). The ESA defines “conserve” broadly as “to use and the use of all methods and procedures which are necessary to bring any endangered ... or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary”—i.e., to the point of full recovery. *Id.* § 1532(3).

Section 7 of the ESA, 16 U.S.C. § 1536, requires all federal agencies to “insure” that any action they propose to authorize, fund, or carry out “is not likely to jeopardize the continued existence of any endangered ... or threatened species or result in the destruction or adverse modification of” any designated critical habitat. 16 U.S.C. § 1536(a)(2). If a proposed federal agency action may affect any listed species or critical habitat, the federal action agency must initiate consultation with the relevant Service. *Id.* §§ 1536(b)(3), (c)(1). The Service must then prepare a biological opinion to determine whether the action is likely to jeopardize any listed species or destroy or adversely modify any designated critical habitat and, if so, to provide “reasonable and prudent alternatives” to the agency action that would avoid jeopardy or adverse modification. 16 U.S.C. § 1536(b)(3)(A). In formulating its biological opinion and determining whether an action will jeopardize a species or destroy or adversely modify its critical habitat, NMFS must use “the best scientific and commercial data available.” 16 U.S.C. § 1536(a)(2).

#### **2. The Trump Rules.**

In 2019, the Trump administration enacted new rules that attempted to weaken the ESA significantly in several respects. *See* 84 Fed. Reg. 44,976 (Aug. 27, 2019) (“Trump Rules”).

Most relevant here, the Trump Rules: (1) changed the definition of “effects of the action” by



limiting both the type and extent of effects of a proposed federal agency action that must be analyzed in the section 7 consultation process; and (2) redefined “environmental baseline” to include “ongoing agency activities or existing agency facilities that are not within the agency’s discretion to modify,” thereby exempting ongoing actions from analysis as effects of an agency action.

The Trump Rules did not alter the definition of “jeopardize the continued existence of” which “means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” 50 CFR 402.02. Nor did the Trump Rules revise the analogous phrase “appreciably diminish,” which is found in the definition of “destruction or adverse modification of critical habitat.” *See id.* Nonetheless, the preamble to the Trump Rules discusses these phrases “to help clarify” the terms and “to discuss some alternative interpretations” that the Trump Administration believed were incorrect. *See* 84 Fed. Reg. 44976, 44985 (Aug. 27, 2019). The preamble explains that NMFS does not “interpret section 7(a)(2) and the regulations thereunder to require that each proposed action improve or increase the likelihood of survival and recovery of the species, or improve the conservation value of critical habitat.” 83 Fed. Reg. 35178-01, 35182 (July 25, 2018). This is true “even where a species already faces severe threats prior to the action.” *Id.* The Trump Rules specifically discuss prior holdings in this case, asserting that, in NMFS’ opinion, the Ninth Circuit, in affirming Judge Redden’s invalidation of the 2004 BiOp, “mistakenly asserted” that “where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm.” *Id.* (citing *NMFS III*, 524 F.3d at 930) (internal quotation marks omitted).

The Trump Rules have been challenged by several states—including Oregon and Washington—and organizations as contrary to the ESA, arbitrary and capricious. *See Cal. et al. v. Bernhardt et al.*, 460 F. Supp. 3d 875 (N.D. Cal. 2020); *Center for Biological Diversity et al.*

*v. Bernhardt et al.*, 2020 WL 4188090, No. 19-cv-05206-JST (N.D. Cal. 2020); *Animal Legal Def. Fund v. Bernhardt et al.*, 2020 WL 6802837, No. 19-cv-06812-JST (N.D. Cal. 2020). That litigation is currently stayed, at the request of NMFS and USFWS, as one of the top priorities of the then-incoming Biden administration was to review actions taken by the Trump administration that “conflict with [] important national objectives,” including protection of the environment. Exec. Order 13990, 86 Fed. Reg. 7037, 7037 (Jan. 20, 2021). On June 4, 2021, NMFS and the USFWS announced that they would “revise, rescind, or reinstate” five ESA regulations changed by the Trump Rules through future rulemaking proceedings.<sup>7</sup> The impact of the Biden Administration’s announcement on this case is unclear at this juncture, but at a minimum, it underscores the Trump Administration’s vastly different policy objectives and interpretations of the ESA applied to the 2020 BiOp.

#### **B. Administrative Procedures Act.**

The ESA does not provide a separate standard of review, so claims under the ESA are reviewed under the well-established standards of the Administrative Procedures Act (“APA”). *See NMFS V*, 184 F. Supp. 3d at 879 (citations omitted). Under the APA, an agency action must be upheld on review unless it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law[.]” 5 U.S.C. § 706(2)(A). “A reviewing court must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.” *NMFS V*, 184 F. Supp. 3d at 879 (internal quotation marks omitted).

#### **C. Standard for issuance of a Preliminary Injunction under the ESA.**

This Court has authority, and has previously exercised that authority, to grant preliminary injunctive relief when the moving party establishes that: (1) it is likely to prevail on the merits; (2) it is likely to suffer irreparable harm in the absence of relief; (3) the balance of equities tips in

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<sup>7</sup> See [https://www.fws.gov/news/ShowNews.cfm?ref=u.s.-fish-and-wildlife-service-and-noaa-fisheries-to-propose-regulatory-&\\_ID=36925](https://www.fws.gov/news/ShowNews.cfm?ref=u.s.-fish-and-wildlife-service-and-noaa-fisheries-to-propose-regulatory-&_ID=36925) (last visited July 6, 2021).

its favor; and (4) an injunction is in the public interest. *See NMFS VI*, 2017 WL 1829588 at \*1 (citing *Winter v. Nat. Res. Defense Council, Inc.*, 555 U.S. 7, 20 (2008)).

As this Court has ruled previously, “the ESA strips courts of at least some of their equitable discretion in determining whether injunctive relief is warranted.” *See NMFS VI*, 2017 WL 1829588 at \*2 (citing *Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1090 (9th Cir. 2015), *cert. denied*, 137 S.Ct. 293 (Oct. 11, 2016)). “[C]ourts do not have discretion to balance the parties’ competing interests in ESA cases because Congress ‘afford[ed] first priority to the declared national policy of saving endangered species.’” *Cottonwood*, 789 F.3d at 1090 (quoting *Tenn. Valley Authority v. Hill*, 437 U.S. 153, 185 (1978)) (“TVA”) (alterations in original).

If a court determines that injunctive relief is warranted, such relief must be tailored to remedy the specific harm. *Melendres v. Arpaio*, 784 F.3d 1254, 1265 (9th Cir. 2015) (citation omitted). “Nevertheless, the district court has broad discretion in fashioning a remedy.” *Id.* (citation omitted). Further, an “enjoined party’s history of noncompliance with prior orders can justify greater court involvement than is ordinarily permitted.” *Id.* (quotation marks omitted).

## ARGUMENT

### **I. Oregon is likely to prevail on the merits of its claims that the 2020 BiOp and ROD violate the ESA.**

#### **A. The 2020 BiOp and ROD violate the ESA by manipulating the environmental baseline and employing a comparative—rather than additive—approach that has been rejected by the Court.**

The 2020 BiOp and ROD employ the Trump Rules’ definition of environmental baseline, which effectively excludes the existence and ongoing operation of the CRS—the subject of the consultation—from environmental review under the ESA. Under this approach, the environmental baseline includes nearly three decades of illegal operations of the CRS that, by NMFS’ own admission, jeopardize listed species. NMFS has attempted to apply this

environmental baseline before, and courts (in this case and others) have resoundingly rejected those attempts.

**1. The Trump Rules violate the ESA as applied in the 2020 BiOp and ROD.**

In an attempt to weaken protections for endangered species, the Trump Rules revised the definition of environmental baseline as follows, with the new text underlined:

Environmental baseline refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

84 Fed. Reg. at 44,976, 45,016 (emphasis added); *see also* 2020 BiOp at 125 [ACE001056344].

The revised definition, as applied in the 2020 BiOp, allows NMFS to include in the environmental baseline the effects of decades of harm to listed species resulting from the existence and ongoing unlawful operation of the CRS for nearly 30 years. NMFS then divorces the harms in the environmental baseline from the analysis by arguing that the terms “jeopardize the continued existence of” and “destruction or adverse modification” are “determinations that are made about the effects of Federal actions” and “not determinations made about the environmental baseline for the proposed action or about the pre-action condition of the species.” 2020 BiOp at 46 [ACE001056265]. This flawed analysis is compounded by NMFS’ application of the revised definition of “effects of the action,” which was significantly narrowed to require that the effects must be a “but for” result of the agency action and “reasonably certain to occur.” 2020 BiOp at 189 [ACE001056408] (citing 50 CFR 402.17(a) and (b)); *see also NMFS II*, 2005 WL 1278878, at \*2 (“reliance on the ‘reasonably certain to occur’ standard is better directed to

mitigation activities than harmful activities.”). NMFS’ application of this narrowed definition fails to give the benefit of the doubt to listed species and attempts to artificially isolate the “effects of the action” from the decades of illegal operations that brought listed fish to the brink of extinction.

The Action Agencies echo this theory in the ROD, arguing that “[t]he analysis under these regulatory definitions must always consider whether the effects of the Selected Alternative’s effects [*sic*] *cause* appreciable reductions to survival and recovery or *cause* appreciable diminishment of the conservation function of critical habitat. This analysis is separate from the analysis of the environmental baseline or a characterization of the condition of the species prior to implementation of the proposed action, even where the proposed action is a continuation of a prior federal action.” ROD at 20 [ACE000339683] (emphasis in original).

Thus, under the federal defendants’ application of the revised regulatory definitions, nearly three decades of unlawful federal action—which NMFS itself concluded would jeopardize listed fish—creates the baseline on top of which additional operations harmful to fish are then measured. Rather than addressing the devastating effects of previous BiOps’ illegal dam operations on fish—or explaining why the survival improvements predicted under those BiOps have not come to fruition—federal defendants subsume that period in the environmental baseline and compare that “baseline” to the narrowly constrained effect of the agency action. This unlawful comparative approach allows federal defendants to conclude that CRS operations will not cause jeopardy or adversely modify critical habitat based on qualitative statements that the effects will be similar, or not *appreciably worse*, for fish than the past decades of illegal operations. The ESA was neither intended to, nor has it been interpreted to, function in this manner.

**2. Courts have soundly rejected federal defendants’ application of the same reasoning that underlies the Trump Rules.**

NMFS has attempted to minimize the perceived impact of federal action under the ESA on other occasions, including in this case. The Ninth Circuit expressly rejected this very approach in its review of the 2004 BiOp, finding that NMFS’ analysis violated the ESA because “instead of assessing whether the listed fish would be jeopardized by the aggregate of the proposed agency action, the environmental baseline, cumulative effects, and current status of the species,” NMFS instead considered “whether the proposed agency action—consisting of only the proposed discretionary operation of the FCRPS—would have an appreciable net effect on a species.” *NMFS III*, 524 F.3d at 926; *see also id.* at 927–28. This approach unlawfully allowed listed species to “be gradually destroyed, so long as each step on the path to destruction is sufficiently modest. This type of slow slide into oblivion is one of the very ills the ESA seeks to prevent.” *Id.* at 930.

The Ninth Circuit further held that NMFS cannot minimize the effects of a federal agency action by classifying portions of that action as “ongoing” and/or “non-discretionary” and subsuming them within the environmental baseline. *See id.* at 926, 928–29. The ESA does not permit “agencies to ignore potential jeopardy risks by labeling parts of an action non-discretionary,” and may not “sweep so-called ‘nondiscretionary’ operations into the environmental baseline, thereby excluding them from the requisite ESA jeopardy analysis.” *Id.* at 929; *see also San Luis & Delta Mendota Water Auth. v. Jewell*, 747 F.3d 581, 639–40 (9th Cir. 2014).

The D.C. Circuit likewise has held that the consulting agency may not “establish[] the environmental baseline without considering the degradation to the environment caused by” the ongoing operation of a hydropower project, and that “attributing ongoing project impacts to the ‘baseline’ and excluding those impacts from the jeopardy analysis” was inadequate under section 7 of the ESA. *Am. Rivers v. FERC*, 895 F.3d 32, 46, 47 (D.C. Cir. 2018); *see also Cooling*

*Water Intake Structure Coal. v. EPA*, 905 F.3d 49, 81 (2nd Cir. 2018) (noting that “[w]here the

future operation of a regulated facility depends upon the discretion of the acting agency, the continued operation of that facility is not a ‘past’ or ‘present’ impact of a previous federal action” that is included in the environmental baseline) (citing *NMFS III*, 524 F.3d at 930–31). NMFS’ analysis of the effects of ongoing actions in the environmental baseline in the 2020 BiOp is contrary to the ESA and controlling precedent.

### **3. The Trump Rules are inconsistent with NMFS’ prior determinations.**

Not only have courts rejected an ESA analysis that minimizes and fails to account for the effects of ongoing federal action, as the Trump Rules do, NMFS itself has rejected that approach in other CRS BiOps. By resurrecting this unlawful analysis in the 2020 BiOp, NMFS deviates markedly from the approach taken in the 2000, 2008 and 2014 BiOps. *See, e.g.*, 2014 BiOp at 184 n.50 [NMFS00040192] (“Prospective effects of ongoing FCRPS operations are properly included only in the proposed action (RPA), rather than in prospective effects of the environmental baseline.”); *id.* at 462 [NMFS00338255] (“The application of the jeopardy standard (see Section 1.7 in the 2008 BiOp) required determining that the aggregate effects of the environmental baseline, cumulative effects, and effects of the action would ensure that the species would survive with an adequate potential for recovery.”); 2000 BiOp at 1-8 (considering the effects of the environmental baseline in the jeopardy analysis).

The federal defendants’ application of the Trump Rules in the 2020 BiOp and ROD violates the ESA, is contravened by controlling case law, and is inconsistent with prior agency interpretations without any rational explanation. It is arbitrary, capricious and an abuse of discretion, and should be rejected. Oregon is likely to prevail on the merits of this claim.

### **B. The jeopardy analysis allows for functional extinction of listed fish and fails to insure that likelihood of recovery is not appreciably diminished.**

The federal defendants’ jeopardy analysis further violates the ESA because it fails to consider and account for the degraded status of the species (caused in large part by CRS operations) and the impact of prolonged low population abundances on the species’ likelihood of



survival and recovery. Instead of remedying the legal errors in the 2014 BiOp’s jeopardy analysis, the 2020 BiOp’s jeopardy analysis allows for functional extinction of the species and abandons recovery metrics altogether. Federal defendants arbitrarily conclude that CRS operations will avoid jeopardy without discussing the wealth of available scientific information—some of which was authored by NMFS scientists— which shows that the species are not likely to survive or recover and instead will continue to decline to extinction if CRS operations continue as planned.

**1. The jeopardy analysis fails to account for the status of the species.**

As it did with its application of the Trump Rules, NMFS applies a standard that has been rejected by courts—including this one—by failing to consider the already dire condition of the species. Citing the preamble to the Trump Rules, NMFS takes the position in the 2020 BiOp that it “does not interpret the statute or its regulations to require the proposed action to improve or increase the likelihood of survival and recovery. Section 7(a)(2) focuses on the ‘continued existence’ of the species, not an improvement in the likelihood of recovery or the attainment of an improved status, which is addressed through section 4 recovery plans.” 2020 BiOp at 46 [ACE001056265]; *see also* 83 Fed. Reg. 35178-01, 35182 (this is true “even where a species already faces severe threats prior to the action.”).

This interpretation, however, has been expressly rejected by this Court and the Ninth Circuit for failing to consider the imperiled status of the species. These courts have held that where, as here, the population is already severely degraded, a standard that reaches a no-jeopardy conclusion with only minimal *improvement* to the species does not satisfy the ESA. Indeed, this Court invalidated the recovery analysis in the 2014 BiOp because it considered population “*growth* regardless of actual population numbers.” *NMFS V*, 184 F. Supp. 3d at 888 (emphasis in original). The Court explained that:

The three [recovery] metrics indicate a trend in growth from wherever an existing population may be, but provide no rational connection from that existing population or the incrementally larger



population anticipated after the RPA actions to ensuring no decreased risk of reaching recovery. A population that is dangerously low in abundance could be increasing, but by only a very few fish per year for the BiOp period, resulting in an abundance level at the end of the BiOp period that remains dangerously low despite the increase in population. Such a small increase in population could still result in all three of the recovery metrics being greater than 1.0, and thus under the “trending toward recovery” standard the population would be deemed not to be in jeopardy under the recovery prong, regardless of how far below minimum viable abundance the population may be at the end of the BiOp period.

*Id.* at 888; *see also id.* at 893 (rejecting defendants’ argument that consideration of status of the species improperly incorporates the section 4 recovery analysis into a section 7 consultation (citing *NMFS III*, 524 F.3d at 936)). Oregon is likely to prevail on its claim that the federal agencies’ interpretation violates the ESA because it fails to account for the imperiled status of species caused by decades of illegal CRS operations.

**2. The jeopardy framework is untethered from minimum requirements for survival and recovery.**

The 2020 BiOp uses life-cycle modeling to project median geometric mean (“geomean”) abundances and QET probabilities to assess the likely effect of hydropower operations under the proposed action, as well as the future effect of habitat restoration actions, hatchery production and predation. *See* 2020 BiOp at 223 [ACE001056442]. These two metrics, as employed in the 2020 BiOp and adopted in the ROD, bear no logical or analytical connection to science-based recovery criteria and are completely untethered from any estimated recovery abundance levels and the rough timeframe to achieve those levels.

**a. The 2020 BiOp and ROD fail to consider that an alarming number of populations are currently at or below QETs.**

This Court has already held that QET modeling is not indicative of whether an action will appreciably reduce a species’ likelihood of recovery. In the 2014 BiOp, NMFS used QET modeling in its “survival prong” analysis and determined the level of improvement necessary to achieve a five percent or less risk of extinction during the next 24 years. *NMFS V*, 184 F. Supp.

3d at 892. The Court held that the QET modeling had no bearing on a species' likelihood of recovery because "even if a species is expected to have a less than five percent risk of extinction in the next 24 years, that does not necessarily mean its chances of recovery are not being appreciably diminished" as "a species can often cling to survival even when recovery is far out of reach." *Id.*

The 2020 BiOp fails to meet even the 2014 BiOp's unlawfully low bar. The 2020 BiOp does not calculate the level of improvement necessary to achieve a five percent or less risk of extinction during the next 24 years, but instead merely provides modeled predictions for QET, without any assessment of whether existing or projected QETs reflect a five percent or less risk of extinction during the next 24 years. *See* 2020 BiOp at 204, 224 [ACE001056423, ACE001056443]. The 2020 BiOp fails to consider—or even acknowledge—that many listed fish populations have already met or exceeded the QET threshold, which certainly moots any need for assessing whether these populations have greater than a 5% chance of meeting that threshold sometime in the future. To fill the void in the 2020 BiOp and ROD, Oregon and the Nez Perce Tribe scientists performed independent analyses to assess current QET status of listed fish impacted by the CRS. Bowles Decl. ¶¶ 20-21. Considering the Nez Perce Tribe and ODFW analyses together as weight-of-evidence for current and projected near-term status relative to extinction risk (i.e., QET), an alarmingly high percentage of listed populations currently exceed the 5% threshold for falling below QET. *Id.* ¶ 23.

Moreover, when a population falls below QET, uncertainty and risk of extinction can accelerate because of heightened vulnerability of small populations to demographic, genetic and environmental risks. This can result in an extinction vortex, where extinction risk accelerates, resilience deteriorates (i.e., vulnerability to chance and unfavorable conditions increases while the ability to respond positively to favorable conditions decreases), and the likelihood of recovery diminishes. *Id.* ¶ 18.

The 2020 BiOp and ROD fail to consider the current QET status of listed fish in the

jeopardy analysis and that, for many populations—particularly those that currently have low abundances and are already at high risk of extinction—the 2020 BiOp itself projects QETs that significantly exceed a five percent risk of extinction in the next 24 years. *See, e.g.*, 2020 BiOp at 228–29 [ACE001 056447-8] (Table 2.2-19b). NMFS and the Corps fail to articulate a rational connection between this finding and their no-jeopardy conclusions.

**b. The 2020 BiOp and ROD fail to make a rational connection between continued low projected abundances and species’ likelihood of survival and recovery.**

The 2020 BiOp and ROD similarly fail to explain how the projected geomean abundances, which remain low for many populations, relate to the species’ likelihood of survival and recovery. The 2020 BiOp reports projected geomean abundances but does not assess or evaluate how these projections compare to minimum viable abundances or any recovery threshold, much less require that any specific goals are met with respect to any of the viable salmonid population (“VSP”) factors as part of the jeopardy analysis. *See NMFS V*, 184 F. Supp. 3d at 887. Like the 2014 BiOp, NMFS’ analysis in the 2020 BiOp ignores the minimum viable abundance numbers identified by the Interior Columbia Technical Review Team (“ICTRT”) without explanation. *See id.* at 872. Many populations are predicted to continue to remain far below the ICTRT’s minimum abundance thresholds. *See Bowles Decl.* ¶ 5. Indeed, NMFS concedes that “[b]ased on the modeling, we expect abundances over the next 24 years to decrease and extinction risk to increase, even when taking into account the benefits of the proposed non-operational conservation measures and the most optimistic hypotheses related to reduced latent mortality.” 2020 BiOp at 289 [ACE001056508]. Despite this stark admission, NMFS provides no reasoned basis to support its conclusion that the likelihood of survival of these fish is not appreciably diminished under the proposed action.

NMFS ultimately does not rely on any quantitative analysis to reach its no-jeopardy conclusion. NMFS instead makes qualitative statements that speculate about effects of the proposed action at the ESU/DPS level. For example, NMFS concludes that the CRSO operations

are not likely to jeopardize any listed species because “the proposed action includes some elements that will harm salmonids and some that will benefit salmonids.” *See* 2020 BiOp at 290 [ACE001056509]; *see also id.* at 428 [ACE001 056647] (Snake River steelhead), 640 [ACE001056859] (Snake River Fall Chinook), 754 [ACE001056973] (Upper Columbia River Spring-run Chinook Salmon), 863 [ACE001057082] (Upper Columbia River steelhead), 967 [ACE001057186] (Middle Columbia River steelhead), 1028 [ACE001057247] (Columbia River Chinook salmon), 1167 [ACE001057386] (Lower Columbia River Steelhead), 1232 [ACE001 057451] (Lower Columbia River Coho salmon), 1283 [ACE001057502] (Upper Willamette River Chinook salmon), 1333 [ACE001057552] (Upper Willamette River steelhead); *see also, e.g.,* 2020 BiOp at 194 [ACE001056413] (“The associated effects [of flow] on SR spring/summer Chinook smolts or adults should not change from recent conditions by a meaningful amount.”). NMFS provides no rational explanation of how its qualitative analysis provides an appropriate basis for a no-jeopardy finding. The 2020 BiOp and ROD do not consider or use the best available scientific information including, but not limited to, the available and credible quantitative information and analyses regarding listed species.

The failure of NFMS and the Corps to address in any meaningful way the likelihood of survival and recovery is arbitrary and capricious, an abuse of discretion and contrary to the ESA. Oregon is likely to prevail on the merits of its claims, and an injunction is appropriate.

**C. The proposed action is vague, uncertain and contains no contingency plan for listed fish, yet the 2020 BiOp concludes no jeopardy for a 15-year period.**

The proposed action purportedly analyzed in the 2020 BiOp—and chosen as the Selected Alternative in the ROD—is the operation, maintenance and associated non-operational conservation measures for the 14 CRS dams for a period of 15 years. The federal agencies conclude that the proposed action and Selected Alternative are not likely to jeopardize listed species or destroy or adversely modify critical habitat for the full 15-year term of the BiOp. This conclusion is arbitrary and capricious. The proposed operations are so vague and undefined that

it is impossible for federal defendants to have a rational basis to assume what the actual action is, let alone *ensure* that it is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of critical habitat of such species. In addition, the proposed action and Selected Alternative are devoid of any contingency plan to protect listed fish from entering an extinction vortex, and they fail to include measures that give the benefit of the doubt to the species as required under the ESA. To make a no-jeopardy finding without even knowing what the federal actions will be—and without any backstop to prevent listed species from sliding into extinction—is arbitrary and capricious, an abuse of discretion and inconsistent with the ESA.

**1. The spill operation is undefined and expressly constrained by BPA’s economic interests.**

One of the key uncertainties is the spill operation to be implemented over the 15-year term of the BiOp. As explained above, *see* Background § IV.A.1, spill levels are defined for only one year: 2021. The 2021 spill operation is described as the “base operation for the first year” of the 15-year term of the 2020 BiOp. *See* EIS App’x R, Part 2 at R-3-1 [ACE001066381]; *see also* EIS App’x V, Part 1, BA at 2-52 to 2-54 [ACE001059563-65] (describing the “initial planned spring spill operation targets” and “initial summer spill operation targets”). This base spill operation is insufficient to ensure that CRS operations are not likely to jeopardize listed species for one year, much less for the full 15-year term of the 2020 BiOp. Indeed, even under best-case scenarios in terms of environmental conditions and operational certainty, both Chinook and steelhead will experience SARs equal to or less than 2 percent—the bare minimum SAR needed to confidently avoid further population declines—over 60 percent of the time under the Selected Alternative. *See* Bowles Decl. ¶ 42 and Table 1.

For the years 2022 to 2035, however, no minimum spill levels nor minimum performance targets are defined. Instead, the federal agencies have discretion to modify spill levels as they deem appropriate to meet their four identified objectives, which includes ensuring that the

financial impact to BPA of the spill operation is no worse than the 2018 spill injunction. *See* EIS App'x R, Part 2 at R-4-1 [ACE001066383]. This approach contains several fundamental legal flaws.

First, under the ESA, federal defendants are required “to halt and reverse the trend toward species extinction, whatever the cost.” *TVA*, 437 U.S. at 184. The financial impact on BPA of the spill operation is not an appropriate consideration under the ESA.

Second, without identifying a minimum spill operation for years 2022 to 2035, NMFS cannot reasonably ensure that CRS operations will not jeopardize listed species or adversely modify critical habitat during that time period. The ESA prohibits the federal agencies from placing the risk of uncertainty on listed fish, which is precisely what they have done here. *See NMFS V*, 184 F. Supp. 3d at 906 (citing *TVA*, 437 U.S. at 194).

Third, the federal agencies claim that there is uncertainty about latent mortality, which they propose to evaluate over the 15-year term of the BiOp by developing and implementing an unspecified study design. *See* EIS App'x R, Part 2 at R-4-2 [ACE001066384]. The parameters of this unspecified study are undefined. As a general matter, an effective study design requires controls, which could include spill curtailments large enough to be able to detect a statistical difference in SARs, which would increase powerhouse encounters and further erode fish protections.<sup>8</sup> To the extent that there is substantive uncertainty about latent mortality, which Oregon disputes, the ESA requires that the uncertainty be resolved in favor of protecting listed species.

Moreover, because no minimum spill levels are defined, the Action Agencies are also free to curtail spill—which provides known survival benefits—for other as yet undisclosed reasons. Because significant uncertainty associated with CRS operations—and the spill

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<sup>8</sup> The only putative study identified by the federal agencies to date is the “block design” spill operation evaluated as Multi-Objective 1 in the EIS and which would constitute a significant reduction in spill during crucial migration periods for juvenile fish.

operation in particular—remains, the Corps has failed to specify adequate fish protections and failed to ensure uncertainty is not shouldered by listed species.

**2. The 2020 BiOp contains no contingency plan to protect listed fish from further declines and extinction.**

Previous iterations of CRS BiOps have, to varying degrees, contained fish contingency plans. The 2000 BiOp’s RPA included an aggressive contingency plan with “advance planning for breach.” 2000 BiOp at 9-5. The RPA required specific actions to “reduce the time needed to seek congressional authorization for breach and ... reduce the time needed for possible implementation” if the hydro and offsite mitigation actions did “not provide the anticipated survival rate increases, or that subsequent information shows the predicted improvements are inadequate.” *Id.*

The predicted survival benefits in the 2000 BiOp did not, and have not, come to fruition, yet the federal agencies failed to seek Congressional authorization for breach, as required by the RPA. Instead, in the 2010 and 2014 BiOps, federal defendants adopted the AMIP, which would be triggered only when the listed fish experienced catastrophic *declines*, not when predicted improvements to listed fish failed to materialize as was the case in the 2000 BiOp. *See* 2014 BiOp at 419 [NMFS00338212]; *see also* Oregon Response to AMIP (ECF No. 1725) (explaining flaws in AMIP); Oregon MSJ (ECF No. 1985) at 42–44 (same). As explained above, *see* Background § I.A, the AMIP triggers were recently tripped, despite the fact that they were intended as crisis safety nets that NMFS did not anticipate would ever be triggered. *See* Bowles Decl. ¶ 6; 2014 BiOp at 419 [NMFS00338212]; AMIP at 31. Nonetheless, when these crisis safety nets were in fact triggered, NMFS’ “rapid response” for the CRS was limited to reliance on status quo operations associated with the Flexible Spill Agreement. *See* Bowles Decl. ¶ 8.

Rather than remedying the AMIP’s deficiencies and providing a robust adaptive management plan based on scientifically sound metrics and related qualitative analyses, or seeking Congressional authorization for breach as required by the 2000 BiOp RPA, federal



defendants discard the AMIP without explanation and fail to adopt any contingency plan whatsoever to address the urgent population status crisis. *See* 2020 BiOp at 91 [ACE001056310] (claiming AMIP abundance triggers “have become outdated”). Instead, the Action Agencies “propose to work with NMFS, USFWS, federal, state and tribal sovereigns and other appropriate parties in any region-wide diagnostic efforts to determine the causes of declines in the abundance of naturally produced salmon and steelhead and to identify and operationalize potential contingency actions *should the need arise*.” *Id.* (emphasis added). This vague intimation of future, unspecified collaboration with some unspecified trigger flatly ignores that an effective contingency plan is urgently necessary today to protect listed fish from further declines and extinction, as well as to ensure that CRS operations are not likely to jeopardize listed fish or adversely modify critical habitat. Oregon is likely to prevail on the merits of this claim, and the Court should order Oregon’s requested injunctive relief to reduce irreparable harm to listed fish.

## **II. Status quo operations will result in irreparable harm.**

Oregon is not required to show an extinction-level threat to the species in the short-term to establish irreparable harm. *See NMFS VII*, 886 F.3d 803, 821 (9th Cir. 2018) (affirming Judge Simon’s 2017 spill order). Nonetheless, the evidence supports such a finding. At the very least, the irreparable harm to listed species is even more dire today than it was over 15 years ago when the Ninth Circuit held that “[c]ontinuation of the status quo could result in irreparable harm” to the threatened salmon and steelhead in the Columbia River. *NWF v. NMFS*, 422 F.3d 782, 796 (9th Cir. 2005) (affirming Judge Redden’s spill order). At no point since that Ninth Circuit ruling have federal defendants offered a biological opinion that complies with the ESA.

### **A. The listed species remain at high risk of extinction.**

The Court is aware that listed fish are in a highly precarious condition and have been for decades. *See NMFS V*, 184 F. Supp. 3d at 879–80 (citing 2014 BiOp at 70–71 and Table 2.1–1 (compiling the most recent data, which shows that 65% of the populations in the listed ESUs are



at high risk of extinction and 28.5% are at a maintained risk of extinction (the second-highest risk category), while only 4% are considered viable and 2.5% are considered highly viable). As explained above, *see* Background § I.A, many populations of listed species have declined significantly in the intervening years since issuance of the 2014 BiOp, and the few that have seen improvements have been marginal. As the Court previously recognized, “the longer a species remains at low population levels, the greater the possibility of extinction from chance events, inbreeding depression, or additional environmental disturbance.” *NMFS V*, 184 F. Supp. 3d at 872 (citing NOAA’s Consultation Handbook). The outlook for these species is dire if the status quo remains, as at-risk populations are already well below the forecasted abundance. *See* Bowles Decl. ¶ 20-23.

**B. At critically low abundance, a single year of poor environmental conditions increases extinction risk.**

The extreme vulnerability of these species to extinction risks was made clear in 2015 and is likely to be demonstrated again in 2021. *See id.* ¶¶ 15, 17. Elevated water temperatures in 2015 resulted in massive fish kills, with thousands of unlisted Columbia River sockeye dying in the impounded sections of the river and over 95% of listed Snake River sockeye succumbing. *Id.* ¶ 57. From 2011 to 2016, the vast majority of the CRS experienced water temperatures above the upper incipient lethal limit for salmon for an extended period of time. *Id.* ¶ 58 and Table 2.

Unfortunately, conditions for 2021 may rival those of 2015, with drought conditions present throughout much of the state and seasonal temperatures above average (for example, excessive water temperatures during the record-breaking heat wave in late June 2021). *Id.* ¶ 15. And, as recognized by this Court in 2016, “[e]ven a single year with detrimental climate conditions can have a devastating effect on the listed salmonids.” *NMFS V*, 184 F. Supp. 3d at 874, 914 (citing examples from 2002 and 2013). Given the critically low abundance status of many listed populations and their heightened extinction risk, it is clear that maintenance of the

status quo will result in irreparable harm and that actions to improve the chances of survival for these species are imperative.

**C. Climate change increases the risk of irreparable harm to listed species.**

The threats from low abundance are exacerbated by climate change, including, but not limited to, the potential for catastrophic weather events. “The best available information indicates that climate change will have a significant negative effect on the listed species,” *NMFS* V, 184 F. Supp. 3d at 914, “particularly in light of the precarious state of many of the listed species, where a few poor years can decimate a population,” *id.* at 918; *see also id.* at 923 (“In light of the fragile state of many of the listed species, such a potential catastrophe should be considered.”). It is widely acknowledged that the probability of higher temperature and lower snowpack is increasing, both of which are threats to salmon recovery. *See, e.g.*, 2014 BiOp at 169–71 [NMFS00337962-64]; 2020 BiOp at 118-24 [ACE001056337-43]; Bowles Decl. ¶¶ 11, 32. Climate change is also associated with more frequent and more severe downturns in environmental conditions for listed species. Bowles Decl. ¶ 32. And, as noted above, 2021 is on target to be yet another very difficult year for salmonids in terms of flow and temperature.

It can no longer be argued that climate change is speculative or limited to some future risk—it is here. A recent publication by NOAA scientists underscores not only the likelihood of climate impacts on the species, but the certainty of extinction if actions are not taken: “With a warming climate, deterministic declines inevitably lead to extinction unless some ecological, evolutionary, or climatic rescue effect occurs.” *Id.* ¶ 12 (quoting Crozier et al. 2021, p. 3-4).

The call to action could not be clearer:

The urgency is greater than ever to identify successful solutions at a large scale and implement known methods for improving survival. Management actions that open new habitat, improve productivity within existing habitat, or reduce mortality through direct or indirect effects in the ocean are desperately needed.

*Id.* (quoting Crozier et al. 2021, p. 9). This type of large-scale management activity is what

NMFS and the Action Agencies should have been pursuing for the past 30 years, instead of

issuing invalid BiOp after invalid BiOp, and allowing the species to reach the point where the “prospects for saving this iconic keystone species . . . are diminishing.” *Id.*

Similarly, data compiled by NOAA and referred to as the “stoplight indicators” show that poor ocean conditions for salmon are occurring more frequently over time and can include multiple years of downturns. *Id.* ¶ 13. Recovery from those poor conditions often falters and is and less frequent. Thus, while current ocean conditions have improved somewhat over the extremely poor conditions in the recent past, that improvement is tenuous with no assurance that improvement will continue. Indeed, NMFS’ projections do not anticipate favorable ocean conditions returning soon. *See* 2020 BiOp at 118-25 [ACE001056337-44].

Federal defendants have failed to address or account for low abundances, deteriorating environmental conditions and concerns regarding extreme climactic events. These failures, taken together, counsel in favor of immediate steps to help buffer populations from the harm caused by current CRS operation, especially in light of the devastating impacts of even a few poor years. It is incumbent upon the agencies to take action to reduce the deleterious impacts of the CRS—which are exacerbated by deteriorating environmental conditions from climate change—sufficient to ensure that the likelihood of survival and recovery is not appreciably diminished. *See NMFS V*, 184 F. Supp. 3d at 917-924 (discussing failure of the 2014 BiOp to account for the effects of the 2014 RPA with climate impacts).

There is no doubt that the listed species have been at dangerously low levels for decades and have recently experienced another significant crisis of critically low abundance. The longer they remain there, the greater the risk of extinction, particularly when catastrophic climate events become increasingly likely. The proposed operations will continue to cause irreparable harm to listed species. An injunction—ordering the Corps to take immediate steps to boost survival and provide a buffer against the harm these species otherwise face from status quo CRS operations—is needed and warranted.

### **III. Balance of equities tip in Oregon’s favor and an injunction is in the public interest.**

Under the ESA, balancing of the equities is not necessary because the balancing has already been done by Congress. *Sierra Club v. Marsh*, 816 F.2d 1376, 1383 (9th Cir. 1987), *abrogated on other grounds as recognized in Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1088–91 (9th Cir. 2015). “In Congress’s view, projects that jeopardize the continued existence of endangered species threatened incalculable harm: accordingly, it decided that the balance of hardships and the public interest tip heavily in favor of endangered species.” *Id.* at 1383; *see also Cottonwood*, 789 F.3d at 1090 (“Congress established an unparalleled public interest in the incalculable value of preserving endangered species. It is the incalculability of the injury that renders the remedies available at law, such as monetary damages ... inadequate.”) (citations and internal quotation marks omitted). The balance of equities weighs strongly in favor of issuance of Oregon’s requested injunction.

### **IV. The Court should order Oregon’s requested injunctive relief.**

The existing configuration of the CRS limits options to provide urgent conservation actions needed to help address CRS impacts on listed fish, particularly in light of ongoing climate change, current continued population declines and low abundances, and high risks of extinction. *See generally* Bowles Decl. Restoration of the lower Snake River via dam breaching or removal is the single most important CRS action that can be taken for listed Snake River fish, which will dramatically reduce heating in the lower Snake River reach, reduce heat loading into the lower Columbia River reservoirs, and help deliver cold water from Dworshak reservoir to the lower Columbia River reservoirs. *Id.* ¶ 59. A comprehensive solution is urgently needed to address the current extinction crisis and provide a pathway to recovery moving forward.

In the interim, however, there are additional conservation actions that can and should be taken within the existing configuration of the CRS to help address CRS impacts and reduce extinction risk. These conservation actions form the basis of Oregon’s requested relief, which focuses on measures that are likely to increase listed species’ life-cycle survival by reducing

powerhouse encounters, juvenile fish travel time and water temperature risks. This relief will reduce irreparable harm in the short-term and is appropriately tailored to address the specific irreparable harms alleged. *See Melendres v. Arpaio*, 784 F.3d 1254, 1265 (9th Cir. 2015). The injunctive relief requested will not provide the desperately needed large-scale improvements that are required to ensure continued viability of the species. However, they are much-needed measures that will at least buy the species a little more time before ongoing irreparable harm results in extinction for many listed populations.

**A. Key stop gap measures should focus on increasing life-cycle survival by reducing powerhouse encounters, travel time and water temperature risks.**

The negative effects of slowed and impeded migration through the impounded CRS are well documented, including impaired physiological transition to a saltwater organism, bioenergetic deficits, increased exposure and vulnerability to predation, increased risk from elevated water temperature, as well as the many stressors and decreased lifecycle survival associated with dam passage. *See Bowles Decl.* ¶ 46. The Court should order the Corps to implement key stop gap measures that focus on increasing life-cycle survival by reducing powerhouse encounters, improving juvenile fish travel time and mitigating water temperature risks.

**1. Increased spill reduces powerhouse encounters and is associated with positive survival benefits.**

As this Court is aware from the 2017 spill injunction proceedings, it is widely agreed that spill benefits fish survival by reducing powerhouse encounters. *See NWF VI*, 2017 WL 1829588, \*7–9 (D. Or. Apr. 3, 2017); *see also Bowles Decl.* ¶ 49. Since those proceedings, evidence that increased spill is associated with positive survival benefits has continued to grow. *See Bowles Decl.* ¶ 50. Recent analyses from the CSS continue to show that increased spill lowers the number of powerhouse encounters for fish that must pass the dams and is associated with higher SARs and life-cycle survival. *Id.* This evidence continues to confirm that increasing

spill, thereby decreasing powerhouse encounters, is the best available tool for increasing fish survival within the existing configuration of the CRS. *Id.*

**2. Reducing travel time and forebay delay is associated with positive survival benefits.**

The CRS not only created enormous concrete barriers that anadromous fish must navigate over or through; it also contributes to the decline of anadromous fish runs by creating massive reservoirs that caused system-wide water velocities to dramatically decrease and fish travel time (“FTT”) to dramatically increase. *Id.* ¶ 52. The water travel time (“WTT”) from Lower Granite to Bonneville was approximately 10 times faster prior to construction and operation of the CRS. *Id.* Slower FTT is directly associated with slower WTT in the CRS. *Id.* FTT is a key factor associated with in-river survival and SARs of Snake River spring/summer Chinook and steelhead and is a key variable in NOAA’s COMPASS model affecting post-Bonneville SARs of Snake River Chinook and steelhead. *Id.*

Spill helps to mitigate for slower FTT because it increases the proportion of flow hitting a dam that goes through the spillways rather than the powerhouse. *Id.* ¶ 53. Juvenile fish tend to follow flow; if most of the flow passes through powerhouses located at the base of the dam, juvenile fish—which are generally surface-oriented—experience delay in the dam forebay until they reorient and swim deep to the powerhouse orifices. *Id.* Thus, shifting a larger proportion of the flow to the spillways is an important tool for reducing forebay delay and its impact on overall FTT and stress. *Id.* Although spill improves SARs and helps reduce forebay delay and overall FTT, it does not help reduce FTT through the main body of mainstem reservoirs. *Id.* ¶ 54. This is because spill does not increase reservoir flows or WTT, nor does it change reservoir configurations. *Id.* Other actions must be taken to help reduce reservoir WTT. *Id.*

In an impounded system, there are only two ways to increase water velocity: augment flow or decrease the cross-sectional area of the reservoir channel by reducing reservoir elevation. *Id.* ¶ 55. Flow augmentation or manipulating reservoir elevation cannot come close to fully

compensating for the lost slope of the free-flowing river and the resulting dramatic decline in WTT and FTT. However, the impounded system is already so compromised that these tools can be used to help avoid further degradation and move slightly toward more normative conditions. *Id.* Difficulty securing additional water to augment flows can be somewhat mitigated by maintaining reservoirs at lower elevations. *Id.* Thus, as discussed in detail below, Oregon requests that the Court order the Corps to do so.

**3. It is becoming increasingly important to mitigate for adverse impacts from elevated water temperature.**

Water temperature is becoming increasingly important in the conservation of listed fish as climate change continues to unfold. *Id.* ¶ 56. The configuration and operation of the CRS contributes directly to elevated water temperature by increasing surface area of water exposed to solar radiation, dramatically slowing water travel time and creating reservoir heat “traps” that do not readily dissipate. *Id.* The frequency, magnitude and duration of elevated water temperature events has increased with climate change and is exacerbated by the CRS. *Id.* The 2020 BiOp acknowledges that “[t]he greatest challenge for migrating SR sockeye salmon adults is the increasing water temperatures as they move upstream through the hydrosystem.” 2020 BiOp at 466 [ACE001056685].

The Corps has not effectively addressed or mitigated elevated water temperature risk in CRS reservoirs and fish ladders. Bowles Decl. ¶ 59. This is partially because very little can be done within the current dam configuration and operation. *Id.* Restoration of the lower Snake River via dam breaching or removal is the single most important CRS action that can be taken, which will dramatically reduce heating in the lower Snake River reach, reduce heat loading into the lower Columbia River reservoirs and help deliver cold water from Dworshak reservoir to the lower Columbia River reservoirs (currently that cold water is dissipated in lower Snake River reservoirs). *Id.* Until a comprehensive long-term solution that includes restoration of the lower Snake River is secured, there are several actions federal defendants can and should take now to

help reduce water temperature risk on listed fish. *Id.* ¶ 60. These include additional spill to improve survival, reduce stress and reduce overall FTT, and reduced reservoir elevations to improve FTT and reduce heating. *Id.*

**B. The Corps should be ordered to maximize benefits to fish within the existing configuration of the eight mainstem dams and to remove economic constraints that limit those benefits.**

**1. The hours of the maximum spill operation should be expanded from 16 to 24 hours per day during the spring spill season.**

Federal defendants have already embraced the efficacy of spill by rolling forward the flexible spill operations into 2021 and providing the maximum amount of water that can be spilled without exceeding state TDG standards for 16 hours per day during the spring spill period. In light of ongoing low abundances and population declines, these spill operations should be expanded to 24 hours per day to provide additional benefits to fish. Oregon requests that the Court order the Corps to spill the maximum amount of water that can be spilled without exceeding state TDG standards for 24 hours per day during the spring spill period at Lower Granite, Lower Monumental, Ice Harbor, McNary, John Day and Bonneville (not to exceed 150 kcfs), thus eliminating the “flex spill” operation that allows for reduced spill for 8 hours per day at those projects for BPA’s power purposes. At Little Goose and The Dalles, the Corps would continue the same planned operations of flex spill and 40% spill up to 125% Gas cap spill, respectively. *See* Proposed Order. CSS modeling estimates that this additional spill could decrease PITPH for Snake River spring-summer Chinook and steelhead by approximately 54% and 59%, respectively, and could improve SARs by approximately 27% and 30%, respectively, compared to modeled results for the Selected Alternative, for fish that out-migrate in the spring. Bowles Decl. ¶ 69.



**2. The Corps should expand surface spill operations to benefit adult steelhead, juveniles that are in the mainstem year-round and early migrating juveniles, all of which are essential to species' diversity.**

Diversity is one of the recognized Viable Salmonid Population (“VSP”) benchmarks for assessing the status of salmon and steelhead, together with population abundance, population growth or productivity, and spatial structure. *Id.* ¶ 76. Diversity refers to the distribution of traits within and among populations that contribute to species persistence and adaptability. *Id.* Because salmon and steelhead exhibit unique traits within and among populations, sustaining variation (diversity) is important to a population’s and ESU’s viability. *Id.* Diversity provides a means for addressing highly variable environmental conditions. *Id.* Similarly, diversity protects species from short-term changes to their physical environment (spatial) and timing or phases of their life cycle (temporal). *Id.* Diversity also helps ensure populations maintain the breadth of characteristics needed to survive and adapt to long-term environmental change. For these reasons, conserving adaptive diversity has been at the center of NMFS’ VSP management strategy. *Id.* Because of their importance to species diversity, failure to protect the diverse and unique life cycle characteristics of species may have a disproportionate impact on ultimate species viability and resilience. *Id.* Conservation measures that protect the diversity of the species are particularly important in light of climate change impacts.

Pursuant to the 2020 BiOp’s Incidental Take Statement (“ITS”), the Action Agencies are required to “implement offseason surface spill as a means of providing safe and effective downstream passage for adult steelhead that overshoot and then migrate back downstream through McNary Dam and the Snake River dams during months when there is no scheduled spill for juvenile passage.” 2020 BiOp at 1399 [ACE001057618]. The ITS requires that surface-oriented spill levels are provided at five projects (the Snake River projects and McNary) between October 1 and November 15 and March 1 to March 30 at least three times per week for four hours per day. Oregon asks that the Court order the Corps to expand the surface-oriented spill operation to provide 24-hour spill from September 1 to the start of the following spring spill

period at all projects (“fall-winter spill” season) at all eight dams for seven days a week.<sup>9</sup> See Bowles Decl. ¶ 74 and Proposed Order. In this context, surface-oriented spill is the minimum amount of spill that will allow fish to access a non-turbine passage route and will benefit:

(a) listed adult steelhead that overshoot their natal tributaries; (b) listed juvenile fish (primarily fall chinook) residing and moving in the impounded reaches outside of the spring and summer migration periods; and (c) listed juvenile fish (from all types of salmon and steelhead) that begin their migration to the ocean before the start of the spring spill season in early April. Bowles Decl. ¶¶ 73, 75.

**a. Expanded surface-oriented spill throughout the fall-winter spill season will provide a survival benefit to adult steelhead.**

It is well documented that adult steelhead are present in mainstem habitat year-round and often overshoot their spawning grounds of origin. The 2020 BiOp describes this life history characteristic with respect to McNary and the Lower Snake River dams. NMFS explains that:

Relatively large numbers of adult steelhead (e.g., MCR steelhead from the John Day, Umatilla, and Walla Walla River MPGs; and SRB steelhead from the Tucannon River population) overshoot McNary and the lower Snake River dams and then volitionally migrate downstream through the dams to reach their natal streams in the fall and spring. To return to natal streams, these fish often have no passage options other than turbines and screened bypass systems once spill operations for juvenile migrants have ended. This behavior has been repeatedly documented and is identified as a threat in the Snake River and Middle Columbia River steelhead recovery plans. Recent observations in Ham et al. 2019, and detections at the newly operated Lower Granite Dam Removable Spillway Weir (RSW) PIT system suggest that overshoot adult steelhead can pass rapidly once a surface passage route is provided.

2020 BiOp at 1399 [ACE001057618]. Overshoot for adult steelhead also occurs at other projects in the Columbia River, and is a considerable threat to 80 percent of Oregon’s extant Middle Columbia summer steelhead populations, especially wild-only populations. Bowles Decl. ¶¶ 81-82.

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<sup>9</sup> The Corp is currently implementing limited surface-oriented spill at John Day, The Dalles, and Bonneville during limited periods outside the spring and summer spill season. Bowles Decl. ¶ 74 and Table 5.

Expanding surface-oriented spill consistent with Oregon's request will provide survival benefits and reduce irreparable harm to adult steelhead. *Id.* ¶ 83. Spillway passage is the safest and most effective route to pass adult steelhead back downstream. *See* 2020 BiOp at 906 [ACE001057125] (citing Colotelo et al. 2013). As the 2020 BiOp reports, "Colotelo et al. (2013) also found that the survival rate of adult steelhead kelts through spillways and surface weirs was high (>95 percent) and survival through turbine units was lowest (<80 percent), indicating that overshoots survive at a higher rate when spill protection is provided when they migrate back downstream." 2020 BiOp at 906 [ACE001057125]. Fall-back related mortality occurs year-round; it is not limited to the very narrow window selected by NMFS for implementation of the surface-oriented spill operation. Bowles Decl. ¶ 84.

**b. Expanded surface-oriented spill will provide a survival benefit to juvenile fish that are present in the mainstem year-round.**

Some listed fish are present in mainstem habitat year-round. Listed summer steelhead have the most diverse life history characteristics of any listed species impacted by the CRS, and they are present in the freshwater habitat, including the mainstem, for anywhere from one to several years after emerging. *Id.* ¶ 86.

Snake River fall Chinook also have unique life history characteristics. Unlike many anadromous species that spawn and rear in tributaries, Snake River fall Chinook spawn and rear in the mainstem Snake River and lower mainstem of major tributaries. *Id.* ¶ 87. It is well documented that subyearling fall Chinook are present in, and moving among and between, mainstem critical habitats within the CRS year-round. *Id.* Although there is annual variation, timing of subyearling dispersal into lower Snake River habitat has been evident September through March. *Id.*

Expanded surface-oriented spill will provide a non-turbine passage route, and the associated survival benefits, to listed species with juveniles overwintering and dispersing through

mainstem year-round. *Id.* ¶ 88. Oregon’s request for expanded surface-oriented spill will reduce the irreparable harm to these fish.

**c. Expanded surface-oriented spill will protect the early portion of the migration run.**

Voluntary spring spill has traditionally begun in early April, informed at least in part on prior observed run timing of the majority of outmigrating smolts. *Id.* ¶ 89. It is becoming more apparent, however, that (1) this timing fails to provide spill for the early portion of the run, which is key for species diversity and resilience to climate change, and (2) the overall run timing appears to be shifting earlier as a result of earlier snowpack melt due to climate change, increasing the proportion of fish that must pass the dams without the benefit of voluntary spill. *Id.*

In 2017, Oregon requested that the Court order the Action Agencies to operate the juvenile bypass and related Passive Integrated Transponder (“PIT”) tag detection system beginning March 1 (earlier than the Action Agencies would otherwise do so). *See NMFS*, 2017 WL 1829588 at \*11 (D. Or. Apr. 3, 2017). Oregon requested this on the basis that early monitoring would provide data regarding the important early “tail” of the salmon and steelhead runs, which will “help inform future management decisions,” and on the basis that early monitoring will provide a biological benefit by providing an alternative to turbine passage for outmigrating fish during the pre-spill period. *Id.* The Court granted the motion “in light of the importance of the tails of a run for diversity and species adaptation,” and ordered that PIT tag monitoring begin on March 1 beginning in 2018. *Id.*

The data collected as a result of the Court-ordered earlier PIT monitoring shows that fish are moving past the dams during this earlier period. Bowles Decl. ¶ 91. Although the number of daily observations of fish passing in the earlier part of March has been relatively low, it is very important to protect even these few fish when, as now, the population total abundances are extremely low. *Id.* The early components of the migration run are also extremely important for

species diversity and may be increasingly important for resilience to climate change. *Id.*

Oregon's request for expanded surface-oriented spill will provide a survival benefit to the fish in this early component of the run by providing them with a spillway passage route, thereby reducing irreparable harm to the fish. *Id.*

**d. Expanded surface-oriented spill operations will minimize impacts adverse impact to fish from zero flow operations**

Another benefit of Oregon's request with respect to surface-oriented spill is that it will help mitigate for a zero-flow operation implemented by the Corps that is detrimental to fish in order to benefit power. Bowles Decl. ¶ 92. Completely shutting off flows in all or portions of the lower Snake and lower Columbia rivers is never good for listed fish. *Id.* However, this has been an operational allowance for the CRS in prior BiOps during winter months, as long as these operations did not start prior to December 1 and considered fish abundance criteria. *Id.* Even this limited fish consideration was rolled back in the ROD and 2020 BiOp, which now allows complete shutoff of nighttime flows in the Snake River as needed to benefit power starting as early as Oct 15. *Id.* This earlier extension also removed the requirement to consider fish abundance criteria. *See* 2020 BiOp at 63 [ACE001056282]; Bowles Decl. ¶ 92. Oregon's requested relief would limit the Corps from completely shutting off all flow because at least some limited surface-oriented spill would be required year-round. Bowles Decl. ¶ 92.

**3. The Corps should develop an implementation plan by September 1, 2022 to operate Columbia Rivers reservoirs at Minimum Operating Pool ("MOP") with a one-foot operating range starting in 2023.**

Under previous BiOps, the LCR reservoirs have not been required to operate at MOP and have not generally had a biologically-constrained operating range, resulting in normal operating elevations up to 6.5-feet above MOP depending on the project. *See* Bowles Decl. ¶ 98. Because this will be a new operation, Oregon requests that the Court order the Corps to prepare an implementation plan by September 1, 2022, to operate the lower Columbia River reservoirs at MOP with a one-foot operating range from March 1 to June 15, beginning in 2023. The

implementation plan is an opportunity for the Corps to identify potential impacts to affected interests and mitigation options. The delay in implementation until spring 2023 will allow some opportunity for those affected sectors to make adjustments.

Dating back to the 1995 BiOp, NMFS recognized that “[d]rawdown reduces the cross-sectional area of the reservoir, increasing water velocity for a given flow. Since juvenile migrants travel faster with increased water velocities, drawdown to MOP is expected to provide faster emigration and improved survival through the pool.” 1995 BiOp at 113. The 1995 BiOp therefore required the Corps “to continue planning, design, and construction to continuously operate John Day pool near MOP by March 1996.” *Id.* Operating John Day Reservoir at MOP with a one-foot operating range is well justified, given the long-recognized adverse impacts of the reservoir on fish and the availability of other alternatives to address avian predation. Bowles Decl. ¶ 100.

Operating all four LCR reservoirs at MOP with a one-foot operating range will improve the likelihood of meeting the velocity equivalents of the flow objectives established for the lower Columbia River, improving associated FTT and survival, and helping to ameliorate temperature risks. Bowles Decl. ¶ 101. A recent comparison by the Fish Passage Center of FTT through the John Day Reservoir based on various forebay elevations and flows at John Day Dam predicted substantial decreases of FTT when operated at MOP when compared to full pool or MIP; similar to Lower Granite, the most significant gains were at low flows and decreased as flows increased. *Id.* Reductions in yearling Chinook FTT associated with MOP elevations ranged from 0.5 to 2 days (depending on flow) when compared to full pool and 0.2 to 0.9 days when compared to MIP. *Id.* Similar gains are predicted for steelhead (0.4 to 1.6 days when comparing MOP to full pool and 0.2 to 0.7 when comparing MOP to MIP). *Id.* These analyses indicate that important additional fish protections can be gained for juvenile outmigrants during the spring if lower Columbia River reservoirs are operating at MOP with a one-foot operating range during that timeframe. *Id.* ¶ 102.

**C. The Corps should restore rollbacks that were implemented to the detriment of fish.**

**1. The Corps should restore the rollbacks in summer spill that were implemented to meet Bonneville's power-cost objective.**

The Flexible Spill Agreement reduced summer spill levels (and the associated fish protections) for the last two weeks in August to meet the power-cost objective that Bonneville must, at a minimum, be no worse financially compared to the 2018 spring spill injunction. *See* Flexible Spill Agreement Attachment Table 1.4. (ECF No. 2298-1). The summer spill operation in the Selected Alternative and proposed action includes the reductions in spill for the last two weeks in August. *See* 2020 BiOp at 58 [ACE001056277] (Table 1.3-2). These reductions in spill result in significantly lower spill proportion for the last two weeks of August, compared to the rest of the summer spill season and compared to prior years. The Corps should be ordered to reinstate the higher spill levels and remove the late August rollback in spill. The Corps should also be ordered to reinstate higher level spills at Ice Harbor and John Day, which were reduced in the Flexible Spill Agreement from the levels specified in the 2014 BiOp. Bowles Decl. ¶ 71.

**2. The lower Snake River reservoirs should be operated at MOP with a one-foot operating range.**

In the recent past, the Corps utilized a one-foot operating range above MOP at the lower Snake River projects for fish protections, consistent with prior Biological Opinions. *Id.* ¶ 95. The 2020 BiOp allows the Corps to increase the operating range above MOP to benefit economic sectors at the expense of these prior fish protections. *Id.*; 2020 BiOp at 58-59 [ACE001056277-78] (Table 1.3-3 n.2 and 3). The 2021 FOP implements the in-season adjustments that allow for “an expanded forebay operating range (Expanded MOP), raised minimum forebay elevation (Raised MOP), or a variable forebay operating range (Variable MOP).” These operating ranges allow for elevations up to 4.5 feet above MOP, depending on flows. Bowles Decl. ¶ 95. Allowing these increased operating ranges has a detrimental impact on fish. *Id.* In light of the current fish crisis, the Court should order the Corps to restore operations that allowed for only the one-foot operating range above MOP. *Id.*



**D. Oregon's requested relief is appropriately tailored.**

Oregon's requested relief is appropriately tailored to address the specific harms alleged and allows for the Corps to make planned and/or unplanned adjustments to injunction spill levels. Oregon's requested relief allows the Corps to continue to make the adjustments allowed under the annual FOP. *See* Proposed Order. Consistent with the proposed order negotiated by the parties to implement the 2018 spill injunction, *see* ECF No. 2250-1, Oregon requests that any party may challenge any spill adjustment or adaptive management action taken by federal defendants that it views as not warranted by the circumstances, after making a reasonable and good faith effort to resolve the dispute through conferral or showing good cause why such conferral was not possible.

**V. Conclusion: it is not too late for listed fish but urgent actions are needed.**

Populations can often withstand downturns in population abundance, but the frequency, magnitude and duration of these downturns all conspire against the inherent resilience of populations, as well as their ability to withstand future downturns and respond to improved conditions. Bowles Decl. ¶ 37. Fortunately, listed Snake River Chinook and steelhead continue to demonstrate resilience and the capacity to respond favorably when conditions allow, so there is hope that they are not yet at the point of no return. *Id.* ¶ 38 and Fig. 9. The magnitude and duration of the current downturns in abundance, productivity and environmental conditions are alarming, and projections do not indicate a positive change. *Id.* Thus, the amplified extinction risk is real and urgent, requiring both a comprehensive long-term solution and immediate



additional stop-gap actions to help mitigate the current situation before it is too late. *Id.* Oregon therefore respectfully requests that the Court grant its Motion and order the Corps to implement Oregon's requested injunctive relief.

DATED August 6, 2021.

Respectfully submitted,

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### **CERTIFICATE OF COMPLIANCE**

This brief complies with Local Rule 7-2(b) and the Court's Order of July 1, 2021 (ECF 2370) granting Oregon's motion to file an opening memorandum in support of its motion for a preliminary injunction of up to 55 pages in length. The memorandum filed herewith is 49 pages long excluding Oregon's motion but including headings, footnotes, and quotations, but excluding the caption, table of contents, table of authorities, signature block, exhibits, and any certificates of counsel.

DATED August 6, 2021.

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